AMENDMENTS TO THE DRAWINGS

Please accept the attached amended Figs. 1-4

Attachment: 4 Replacement Sheet(s)

REMARKS

Claims 13-26 are all the claims pending in the application.

Claims 1 and 25 have been amended to address the issues raised in paragraphs 7-9 of the Office action.

The specification and drawings have been amended to address the issues raised by the examiner in Paragraphs 2-6 of the Office action.

All prior art rejections are respectfully traversed.

Hooper describes a multimedia distribution system between multimedia servers 200 and clients 10. The servers communicate with the clients via bidirectional data and control paths (col. 3, lines 13-14), the bidirectional data path being made up of paths 104 and 106 (col. 3, lines 16-17) and the control data path being made up of paths 105 and 107.

The invention defined in claim 13 of the present application includes three elements:

a unidirectional information flow from the multicast router to the subscriber access node over a point-to-multipoint connection,

a bidirectional flow of control data between the multicast router and each end user via the subscriber access node over separate point-to-point connections, and

at the subscriber access node, replication of the incoming unidirectional information flow from the router to form separate unidirectional multicast information flows sent from the subscriber access node to each of the end users over respective point-to-point links.

Hooper does not show unidirectional information flow, but in fact bidirectional data flow. But the bidirectional information data flow is carried out over separate unidirectional busses 10 and 106, so it will be assumed for purposes of the present discussion that this satisfies the claim requirement of a unidirectional data flow. But the present inventors do not claim to have invented unidirectional flow. What is still missing is (1) no teaching in Hooper that the link 105 is point-to-multi-point, and (2) no teaching of the link 105 is between a multicast router and an access node.

Regarding the point-to-multipoint aspect, the examiner refers to lines 60-65 of column 1, but this is simply a very broad characterization of some prior art systems, and does not at all mean that the link 105 is point-to-multipoint.

More importantly, regarding the requirement of a multicast router and access node, the examiner seems to refer to elements 200-203 of Hooper as the claimed multicast router, but this is not warranted. Element 200 is a server, and is never described b Hooper as anything other than a server. It is not a "server/router" as characterized by the examiner. "Router" is a very well understood term in the art, and there is no description in Hooper of having the servers 200 perform any routing function. Elements 201 and 202 are routers, disposed in a control data connection path between the servers 200 and clients 10, but there is no unidirectional information flow from the routers 201 and 202 to the subscriber access node over a point-to-multipoint connection as is required of claim 13.

The next requirement of claim 13 is for a bidirectional flow of control data between the multicast router and each end user via the subscriber access node over separate point-to-point

connections. There is a bidirectional flow of control data in Hooper, but as discussed above, there is no subscriber access node.

The last element of claim 13 is replication of the unidirectional data flow at the subscriber access node and sending the data out to each end user over a respective point-to-point links. Hooper does not describe a subscriber access node, and certainly does not describe any replication at such a subscriber access node.

Recognizing this last-mentioned deficiency in Hoper, the examiner relies on Rothschild. The examiner refers to Fig. 8 and the description thereof at column 7, but these do not teach the features missing from Hooper.

In Fig. 8 of Rothschild, a multicast server 105 communicates with host systems 112-115 over a point-to-multipoint connection 111. Lines 40-44 of column 8 explain that the cells carried by the point-to-multipoint connection 111 are replicated at the branching points of the network tree and are then forwarded down the branching network links. This is the conventional approach to replication acknowledged in the Background discussion of the present application. The solution provided by the present invention is to put off replication until the end of the path, at the subscriber access node, and Rothschild teaches directly away from this at lines 40-44 of column 7 and in Fig. 8.

If one of skill in the art were to consider both Hooper and Rothschild, it is submitted that the only obvious combination of the two would have been to do what Rothschild shows in Fig. 8, in the distribution system of Fig. 2 of Hooper, i.e., the connection 104 in Hooper would be implemented as shown in Fig. 8 of Rothschild, with the multicast information data being replicated at the branching points of the network. This would result in the prior art

acknowledged in the Background section of the present application. Nether of Hooper or Rothschild even discusses subscribe access nodes, so it is clear that neither teaches the deferral of information replication until the subscriber access node.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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